AMENDMENTS TO THE CLAIMS:

1.   (Currently Amended) A node that configures a spanning tree over a network to which a plurality of nodes are connected, comprising:

means for generating a new spanning tree after a network configuration change while continuing to operate only ~~the~~a spanning tree that existed before the network configuration change, and

means for switching ~~the~~a spanning tree to be used for forwarding to said new spanning tree only after said new spanning tree has ~~been stable.~~not varied for a predetermined time,

said switching comprising said node using at any time, as said spanning tree to be used for forwarding, at most one of said new spanning tree and said spanning tree that existed before the network configuration change.

2.   (Currently Amended) The node as set forth in claim 1, wherein said network configuration change comprises an addition or a removal of a node or a change in a link topology.

3.   (Currently Amended) A node that configures a spanning tree over a network to which a plurality of nodes are connected, comprising:

means for generating, at a time of a link cost change of the network, a new spanning tree after the cost change while continuing to operate an existing spanning tree, and

means for switching the spanning tree to be used for forwarding to said new spanning

tree only after said new spanning tree has ~~been stable.~~not varied for a predetermined time.

said switching comprising said node using at any time, as said spanning tree to be used for forwarding, at most one of said new spanning tree and said existing spanning tree.

4.   (Withdrawn) A node that configures a spanning tree over a network to which a plurality of nodes are connected, comprising:

a plurality of tree managers that generate a plurality of independently operating spanning trees,

a tag table that returns a tag corresponding to the spanning tree that is used for forwarding,

a tag insertion unit that inserts the tag that has been returned from said tag table into a frame,

a tree selector that determines the spanning tree used for forwarding,

a forwarding table in which a forwarding output destination of the frame is recorded by destination,

a frame forwarding unit that forwards the frame to the forwarding output destination that is specified in said forwarding table, and

a separator that determines the tree manager of the forwarding destination of said frame according to said tag.

5.   (Withdrawn – Currently Amended) The node as set forth in claim 4, wherein said tree selector comprises:

a main controller that performs switching of the spanning tree used for forwarding,

a stable timer that notifies of ~~the~~an expiration of the timer for a specified time, which

indicates a stabilization of the spanning tree,

a tag remove unit that removes the tag that has been added to the frame,

a GVRP transmitter/receiver that transmits a control frame to switch spanning trees,

and

a tag insertion unit that adds a tag to the frame.

6.   (Withdrawn - Previously Presented) The node as set forth in claim 5, wherein said

tree selector comprises:

an arrival interval timer that sends a timer expiration notice after a given length of

time has elapsed, in order to determine frame arrival intervals, which indicate the

stabilization of the spanning tree.

7.   (Withdrawn - Currently Amended) The node as set forth in claim 4, wherein said tree

selector comprises:

a cost reference timer that notifies of the expiration of the timer for a specified time

used for ~~the~~a calculation of link cost.

8.   (Withdrawn - Previously Presented) The node as set forth in claim 4, wherein said

tree manager comprises:

a tag remove unit that removes the tag that has been added to the frame,

a BPDU transmitter/receiver that transmits and receives a BPDU,

a tag insertion unit that adds a tag to the frame,

a tree controller that creates the spanning tree according to a spanning tree protocol,

and

a tree table that retains parameters used in said spanning tree protocol.

9.   (Withdrawn - Currently Amended) The node as set forth in claim 8 wherein said tree

manager comprises:

a cost operator that adds a prescribed setting value to ~~the~~a link cost that has been

notified and returns it.

10.   (Withdrawn - Currently Amended) The node as set forth in claim 4, further

comprising a resource monitor that measures resource information including ~~the~~a connection

status and ~~the~~a free bandwidth of a link.

11.   (Previously Presented) The node as set forth in claim 3, wherein said link cost is

calculated based on an availability status.

12.   (Previously Presented) The node as set forth in claim 11, wherein said availability

status is defined as a free bandwidth.

13.   (Currently Amended) The node as set forth in claim ~~1,~~11, wherein said availability

status is defined as a CPU ~~load.~~(Central Processing Unit) load, said CPU load comprising a

portion of a CPU capability being utilized.

14.   (Previously Presented) A node that configures a spanning tree over a network to which a plurality of nodes are connected, comprising means for generating a spanning tree in which each node in the network serves continually as a root node, and for forwarding a frame (frames) using a spanning tree in which a destination serves as a root node.

15.   (Withdrawn - Currently Amended) A node that configures a spanning tree over a network to which a plurality of nodes are connected, comprising:

a plurality of tree managers that generate a plurality of independently operating spanning trees,

a tag table that returns a tag corresponding to ~~the~~a spanning tree that is used for forwarding,

a tag insertion unit that inserts the tag that has been returned from said tag table into a frame,

a tree selector that generates as many tree managers as a number of root nodes that exist in the network,

a forwarding table in which a forwarding output destination of the frame is recorded by destination,

a frame forwarding unit that forwards the frame to the forwarding output destination that is specified in said forwarding table, and

a separator that determines the tree manager of the forwarding destination of said frame according to said tag.

16.   (Withdrawn - Previously Presented) The node as set forth in claim 15, wherein said

tree selector comprises:

a main controller that creates or removes the tree manager,

a tag remove unit that removes the tag that has been added to the frame,

a GVRP transmitter/receiver that transmits a control frame to switch spanning trees,

and

a tag insertion unit that adds a tag to the frame.

17.   (Withdrawn - Previously Presented) The node as set forth in claim 15, wherein said

tree manager comprises:

a tag remove unit that removes the tag that has been added to the frame,

a BPDU transmitter/receiver that transmits and receives a BPDU,

a tag insertion unit that adds a tag to the frame,

a tree controller that creates the spanning tree according to a spanning tree protocol,

and

a tree table that retains parameters used in said spanning tree protocol.

18.   (Withdrawn - Previously Presented) The node as set forth in claim 15, further

comprising a resource monitor that measures resource information including a connection

status and a free bandwidth of a link.

19.   (Withdrawn - Previously Presented) A node that configures a spanning tree over a

network to which a plurality of nodes are connected, wherein a tree manager that generates

the spanning tree comprises a cost operator that adjusts a cost value based on a type and a

version of a spanning tree protocol.

20. (Withdrawn - Previously Presented) The node as set forth in claim 19, wherein said cost operator allocates a high cost to a link that uses a protocol whose failure recovery processing is slow.

21. (Withdrawn - Currently Amended) A node that configures a spanning tree over a network to which a plurality of nodes are connected, comprising a spanning tree generator for generating a spanning tree in which a cost of each link is maximum for each link that exists in the network and that uses a protocol whose operation is slow and, in case a failure occurs at said each link, forwarding a frame using ~~the~~a tree in which the cost of said link is maximum.

22. (Withdrawn - Currently Amended) A node that configures a spanning tree over a network to which a plurality of nodes are connected, comprising:

a plurality of tree managers that generate a plurality of independently operating spanning ~~trees,~~trees;

a tag table that returns a tag corresponding to the tree that is used for ~~forwarding.~~forwarding;

a tag insertion unit that inserts the tag that has been returned from said tag table into a ~~frame,~~frame;

a tree selector that generates as many tree managers as a number of links that exist in the network and that use a protocol whose operation is ~~slow,~~slow;

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a forwarding table in which a forwarding output destination of the frame is recorded

by ~~destination,~~destination:

a frame forwarding unit that forwards the frame to the forwarding output destination

that is specified in said forwarding ~~table,~~table; and

a separator that determines the tree manager of the forwarding destination according

to said tag.

23.   (Withdrawn - Currently Amended) The node as set forth in claim 22, wherein said

tree selector comprises:

a main controller in the tree selector that creates or removes the tree

~~manager,~~manager:

a tag remove unit that removes the tag that has been added to the ~~frame,~~frame:

a GVRP transmitter/receiver that transmits a control ~~frame,~~frame: and

a tag insertion unit that adds a tag to the frame.

24.   (Withdrawn - Currently Amended) The node as set forth in claim 22, wherein said

tree manager comprises:

a tag remove unit that removes the tag that has been added to the ~~frame,~~frame:

a BPDU transmitter/receiver that transmits and receives a ~~BPDU,~~BPDU:

a tag insertion unit that adds a tag to the ~~frame,~~frame:

a tree controller that creates the spanning tree according to a spanning tree

~~protocol,~~protocol: and

a tree table that retains parameters used in the spanning tree protocol.

25. (Withdrawn - Currently Amended) The node as set forth in claim 22, further comprising a resource monitor that measures resource information including ~~the~~a connection status and ~~the~~a free bandwidth of a link.

26. (Withdrawn - Previously Presented) The node as set forth in claim 4, further comprising a failure detector that transmits and receives frames for failure detection at intervals shorter than those of HELLO frames that are used by the spanning tree protocol to detect a failure.

27. (Withdrawn - Previously Presented) The node as set forth in claim 4, wherein said forwarding table possesses a broadcast output port field.

28. (Withdrawn - Previously Presented) The node as set forth in claim 4, wherein said forwarding table possesses an auxiliary output port field.

29. (Withdrawn - Previously Presented) The node as set forth in claim 4, wherein an output destination port is determined using a port type determined by the spanning tree.

30. (Withdrawn - Previously Presented) The node as set forth in claim 29, wherein the port type determined by said spanning tree comprises one of a Root Port and a Designated Port.

31.   (Currently Amended) A computer-readable storage medium on which is encoded a

spanning tree configuration program of machine-readable instructions that operates on each

node that configures a spanning tree over a network to which a plurality of nodes are

connected, said instructions comprising a function that generates a new spanning tree after a

network configuration change while continuing to operate only ~~the~~a spanning tree that existed

before the network configuration change, and switches ~~the~~a spanning tree to be used for

forwarding to said new spanning tree only after said new spanning tree has ~~been stable.~~not

varied for a predetermined time.

said switching comprising said node using at any time, as said spanning tree to be

used for forwarding, at most one of said new spanning tree and said spanning tree that existed

before the network configuration change.

32.   (Previously Presented) The computer-readable storage medium on which is encoded

a spanning tree configuration program as set forth in claim 31, wherein

said network configuration change comprises an addition or a removal of a node or a

change in a link topology.

33.   (Currently Amended) A computer-readable storage medium on which is encoded a

spanning tree configuration program of machine-readable instructions that operates on each

node that configures a spanning tree over a network to which a plurality of nodes are

connected, said instructions comprising

a function that generates, at a time of a link cost change of the network, a new

spanning tree after the link cost change while continuing to operate only an existing spanning

tree, and switches ~~the~~a spanning tree to be used for forwarding to said new spanning tree only

after said new spanning tree has ~~been stable.~~not varied for a predetermined time,

said switching comprising said node using at any time, as said spanning tree to be

used for forwarding, at most one of said new spanning tree and said existing spanning tree.

34.   (Withdrawn – Currently Amended) A computer-readable storage medium on which

is encoded a spanning tree configuration program that operates on each node that configures a

spanning tree over a network to which a plurality of nodes are connected, comprising:

a function that generates a plurality of independently operating spanning trees, via a

plurality of tree ~~managers,~~managers;

a function that returns a tag corresponding to the spanning tree that is used for

~~forwarding,~~forwarding;

a tag insertion function that inserts said tag that has been returned into a ~~frame,~~frame;

a tree selector function that determines the tree used for ~~forwarding,~~forwarding;

a forwarding table function in which a forwarding output destination of the frame is

recorded by ~~destination,~~destination;

a frame forwarding function that forwards the frame to the forwarding output

destination that is specified in said forwarding ~~table,~~table; and

a separator function that determines the tree manager of the forwarding destination

according to said tag.

35.   (Withdrawn – Currently Amended) The computer-readable storage medium on which

is encoded a spanning tree configuration program as set forth in claim 34, wherein said tree

selector function executes:

a controller function that performs switching of the spanning tree used for

~~forwarding,~~forwarding:

a stable timer function that notifies of an expiration of a timer for a specified time,

which indicates a stabilization of the spanning ~~tree,~~tree:

a tag remove function that removes the tag that has been added to the ~~frame,~~frame:

a GVRP (Generic VLAN Registration Protocol) transmitter/receiver function that

transmits a control frame to switch spanning ~~trees,~~trees: and

a tag insertion function that adds the tag to the frame.

36.   (Withdrawn – Currently Amended) The computer-readable storage medium on which

is encoded a spanning tree configuration program as set forth in claim 35, wherein

said tree selector function executes:

an arrival interval timer function that sends a timer expiration notice after a given

length of time has elapsed, in order to determine frame arrival intervals, which

~~indicate~~indicates the stabilization of the spanning tree.

37.   (Withdrawn – Previously Presented) The computer-readable storage medium on

which is encoded a spanning tree configuration program as set forth in claim 34, wherein a

tree selector function executes:

a cost reference timer function that notifies of an expiration of a timer for a specified

time used for a calculation of link cost.

38.   (Withdrawn – Currently Amended) The computer-readable storage medium on which

is encoded a spanning tree configuration program as set forth in claim 34 wherein a tree

manager function executes:

a tag remove function that removes the tag that has been added to the ~~frame,~~frame:

a BPDU (Bridge Protocol Data Unit) transmitter/receiver function that transmits and

receives a ~~BPDU,~~BPDU:

a tag insertion function that adds a tag to the ~~frame,~~frame:

a tree controller function that creates the spanning tree according to a spanning tree

~~protocol,~~protocol; and

a tree table function that retains parameters used in said spanning tree protocol.

39.   (Withdrawn – Previously Presented) The computer-readable storage medium on

which is encoded a spanning tree configuration program as set forth in claim 38, wherein

said tree manager function executes a cost operator function that adds a prescribed

setting value to a link cost that has been notified and returns it.

40.   (Withdrawn – Previously Presented) The computer-readable storage medium on

which is encoded a spanning tree configuration program as set forth in claim 34, further

comprising a function for executing a resource monitor function that measures resource

information including a connection status and a free bandwidth of a link.

41.   (Previously Presented) The computer-readable storage medium on which is encoded

a spanning tree configuration program as set forth in claim 33, further comprising a function

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for executing a function that calculates the link cost based on an availability status.

42.   (Previously Presented) The computer-readable storage medium on which is encoded a spanning tree configuration program as set forth in claim 41, wherein said availability status is defined as a free bandwidth.

43.   (Currently Amended) The computer-readable storage medium on which is encoded a spanning tree configuration program as set forth in claim 41, wherein

said availability status is defined as a CPU load.(Central Processing Unit) load, said CPU load comprising a portion of a CPU capability being utilized.

44.   (Previously Presented) A computer-readable storage medium on which is encoded a spanning tree configuration program of machine-readable instructions that operates on each node that configures a spanning tree over a network to which a plurality of nodes are connected, said instructions comprising

a function that generates a spanning tree in which each node in the network serves continually as a root node, and that forwards a frame using a tree in which a destination serves as a root node.

45.   (Withdrawn – Currently Amended) A computer-readable storage medium on which is encoded a spanning tree configuration program of machine-readable instructions that operates on each node that configures a spanning tree over a network to which a plurality of nodes are connected, said instructions comprising:

a plurality of tree manager functions that generate a plurality of independently

operating spanning ~~trees,~~trees:

a tag table function that returns a tag corresponding to a spanning tree that is used for

~~forwarding,~~forwarding:

a tag insertion function that inserts the tag that has been returned from said tag table

into a ~~frame,~~frame:

a tree selector function that generates as many tree managers as a number of root

nodes that exist in the ~~network,~~network:

a forwarding table function in which a forwarding output destination of the frame is

recorded by ~~destination,~~destination:

a frame forwarding function that forwards the frame to a forwarding output

destination that is specified in said forwarding ~~table,~~table: and

a separator function that determines a tree manager of the forwarding destination of

said frame according to said tag.

46.   (Withdrawn – Currently Amended) The computer-readable storage medium on which

is encoded a spanning tree configuration program as set forth in claim 45, wherein said tree

selector function executes:

a main controller function in the tree selector that creates or removes a tree

~~manager,~~manager:

a tag remove function that removes the tag that has been added to the ~~frame,~~frame:

a GVRP (Generic VLAN Registration Protocol) transmitter/receiver function that

transmits a control frame to switch spanning ~~trees,~~trees: and

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a tag insertion function that adds a tag to the frame.

47.   (Withdrawn – Currently Amended) The computer-readable storage medium on which

is encoded a spanning tree configuration program as set forth in claim 45, wherein said tree

manager function executes:

a tag remove function that removes the tag that has been added to the ~~frame,~~frame:

a BPDU (Bridge Protocol Data Unit) transmitter/receiver function that transmits and

receives a ~~BPDU,~~BPDU:

a tag insertion function that adds a tag to the ~~frame,~~frame:

a tree controller function that creates the spanning tree according to a spanning tree

~~protocol,~~protocol: and

a tree table function that retains parameters used in said spanning tree protocol.

48.   (Withdrawn – Previously Presented) The computer-readable storage medium on

which is encoded a spanning tree configuration program as set forth in claim 45, wherein

each of said nodes executes a resource monitor function that measures resource information

including a connection status and a free bandwidth of a link.

49.   (Withdrawn – Previously Presented) A computer-readable storage medium on which

is encoded a spanning tree configuration program of machine-readable instructions that

operates on each node that configures a spanning tree over a network to which a plurality of

nodes are connected, a method of said instructions

generating a spanning tree in which a cost of each link is maximum for each link that

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exists in the network and that uses a protocol whose operation is slow and in a case a failure

occurs at said each link, forwarding a frame using the tree in which the cost of said link is

maximum.

50.   (Withdrawn – Currently Amended) A computer-readable storage medium on which

is encoded a spanning tree configuration program of machine-readable instructions that

operates on each node that configures a spanning tree over a network to which a plurality of

nodes are connected, said instructions comprising:

a plurality of tree manager functions that generate a plurality of independently

operating spanning trees,trees;

a tag table function that returns a tag corresponding to a tree that is used for

forwarding,forwarding;

a tag insertion function that inserts the tag that has been returned from said tag table

into a frame,frame;

a tree selector function that generates as many tree managers as a number of links that

exist in the network and use a protocol whose operation is slow,slow;

a forwarding table function in which a forwarding output destination of the frame is

recorded by destination,destination;

a frame forwarding function that forwards the frame to the forwarding output

destination that is specified in said forwarding table,table; and

a separator function that determines a tree manager of the forwarding destination of

the frame according to said tag.

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51.   (Withdrawn – Currently Amended) The computer-readable storage medium on which

is encoded a spanning tree configuration program as set forth in claim 50, wherein said tree

selector function comprises:

a main controller function in a tree selector that creates or removes a tree

~~manager,~~manager:

a tag remove function that removes the tag that has been added to the ~~frame,~~frame:

a GVRP (Generic VLAN Registration Protocol) transmitter/receiver function that

transmits a control ~~frame,~~frame: and

a tag insertion function that adds a tag to the frame.

52.   (Withdrawn – Currently Amended) The computer-readable storage medium on which

is encoded a spanning tree configuration program as set forth in claim 50, wherein said tree

manager function comprises:

a tag remove function that removes the tag that has been added to the ~~frame,~~frame:

a BPDU (Bridge Protocol Data Unit) transmitter/receiver function that transmits and

receives a ~~BPDU,~~BPDU:

a tag insertion function that adds a tag to the ~~frame,~~frame:

a tree controller function that creates the spanning tree according to a spanning tree

~~protocol,~~protocol: and

a tree table function that retains parameters used in the spanning tree protocol.

53.   (Withdrawn – Previously Presented) The computer-readable storage medium on

which is encoded a spanning tree configuration program as set forth in claim 50, wherein

each of said nodes executes a resource monitor function that measures resource information

including a connection status and a free bandwidth of a link.

54.   (Withdrawn – Previously Presented) The computer-readable storage medium on

which is encoded a spanning tree configuration program as set forth in claim 34, wherein said

forwarding table possesses a broadcast output port field.

55.   (Withdrawn – Previously Presented) The computer-readable storage medium on

which is encoded a spanning tree configuration program as set forth in claim 34, wherein said

forwarding table possesses an auxiliary output port field.

56.   (Withdrawn – Previously Presented) The computer-readable storage medium on

which is encoded a spanning tree configuration program as set forth in claim 34, wherein an

output destination port is determined using a port type determined by the spanning tree.

57.   (Withdrawn – Previously Presented) The computer-readable storage medium on

which is encoded a spanning tree configuration program as set forth in claim 56, wherein the

port type determined by said spanning tree comprises one of a Root Port and a Designated

Port.

58.   (Currently Amended) A network system in which a forwarding path is set by a

spanning tree over a network to which a plurality of nodes are connected, wherein

each of said nodes generates a new spanning tree after a network configuration

change while continuing to operate only ~~the~~a spanning tree that existed before the <u>network</u>

configuration change, and switches ~~the~~a spanning tree to be used for forwarding to said new

spanning tree only after said new spanning tree has ~~been stable.~~ <u>not varied for a</u>

<u>predetermined time,</u>

<u>said switching comprising each of said nodes using at any time, as said spanning tree</u>

<u>to be used for forwarding, at most one of said new spanning tree and said spanning tree that</u>

<u>existed before the network configuration change.</u>

59.　(Currently Amended)　A network system in which a forwarding path is set by a

spanning tree over a network to which a plurality of nodes are connected wherein

each of said nodes generates, at a time of a link cost change of the network, a new

spanning tree after the <u>link</u> cost change while continuing to operate only an existing spanning

tree, and switches ~~the~~a spanning tree to be used for forwarding to said new spanning tree only

after said new spanning tree has ~~been stable.~~ <u>not varied for a predetermined time,</u>

<u>said switching comprising each of said nodes using at any time, as said spanning tree</u>

<u>to be used for forwarding, at most one of said new spanning tree and said existing spanning</u>

<u>tree.</u>

60.　(Withdrawn - Currently Amended)　A network system in which a forwarding path is

set by a spanning tree over a network to which a plurality of nodes are connected, wherein

each of said nodes comprises:

a plurality of tree managers that generate a plurality of independently operating

spanning ~~trees,~~<u>trees:</u>

a tag table that returns a tag corresponding to the spanning tree that is used for

~~forwarding,~~forwarding:

a tag insertion unit that inserts the tag that has been returned from said tag table into a

~~frame,~~frame:

a tree selector that determines the spanning tree used for ~~forwarding,~~forwarding:

a forwarding table in which a forwarding output destination of the frame is recorded

by ~~destination,~~destination:

a frame forwarding unit that forwards the frame to the forwarding output destination

that is specified in said forwarding ~~table,~~table: and

a separator that determines the tree manager of the forwarding destination of said

frame according to said tag.

61.   (Previously Presented) The network system as set forth in claim 59, wherein a link

cost is calculated based on an availability status.

62.   (Currently Amended) A network system in which a forwarding path is set by a

spanning tree over a network to which a plurality of nodes are connected, comprising:

a tree manager generating a spanning tree in which each node in the network serves

continually as a root node, and forwarding a frame using a spanning tree in which ~~the~~a

destination serves as a root node.

63.   (Withdrawn - Currently Amended) A network system in which a forwarding path is

set by a spanning tree over a network to which a plurality of nodes are connected,

comprising:

a plurality of tree managers that generate a plurality of independently operating

spanning trees,trees;

a tag table that returns a tag corresponding to the tree that is used for

forwarding,forwarding;

a tag insertion unit that inserts the tag that has been returned from said tag table into a

frame,frame;

a tree selector that generates as many tree managers as a number of nodes that exist in

the network,network;

a forwarding table in which a forwarding output destination of the frame is recorded

by destination,destination;

a frame forwarding unit that forwards the frame to the forwarding output destination

that is specified in said forwarding table,table; and

a separator that determines the tree manager of the forwarding destination of said

frame according to said tag.

64.   (Previously Presented) A network system in which a forwarding path is set by a

spanning tree over a network to which a plurality of nodes are connected, wherein a tree

manager that generates the spanning tree executes a cost operation processing that adjusts a

cost value based on a type and a version of a spanning tree protocol.

65.   (Previously Presented) A network system in which a forwarding path is set by a

spanning tree over a network to which a plurality of nodes are connected, wherein a tree

manager that generates the spanning tree comprises a cost operator that adjusts a cost value

based on a type and a version of a spanning tree protocol.

66.   (Withdrawn - Previously Presented) A network system in which a forwarding path is

set by a spanning tree over a network to which a plurality of nodes are connected,

comprising:

a tree manager generating a spanning tree in which a cost of each link is maximum for

each link that exists in the network and that uses a protocol whose operation is slow and in

case a failure occurs at said each link, forwarding a frame using a tree in which the cost of

said link is maximum.

67.   (Withdrawn - Currently Amended) A network system in which a forwarding path is

set by a spanning tree over a network to which a plurality of nodes are connected,

comprising:

a plurality of tree managers that generate a plurality of independently operating

spanning ~~trees,~~trees;

a tag table that returns a tag corresponding to a tree that is used for

~~forwarding,~~forwarding;

a tag insertion unit that inserts the tag that has been returned from said tag table into a

~~frame,~~frame;

a tree selector that generates as many tree managers as a number of links that exist in

the network and use a protocol whose operation is ~~slow,~~slow;

a forwarding table in which a forwarding output destination of the frame is recorded

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by ~~destination,~~destination;

a frame forwarding unit that forwards the frame to a forwarding output destination that is specified in said forwarding ~~table,~~table; and

a separator that determines the tree manager of the forwarding destination of said frame according to said tag.

68.   (Withdrawn) The network system as set forth in claim 60 wherein

said forwarding table possesses a broadcast output port field.

69.   (Withdrawn - Previously Presented) The network system as set forth in claim 60, wherein said forwarding table possesses an auxiliary output port field.

70.   (Withdrawn - Previously Presented) The network system as set forth in claim 60, wherein an output destination port is determined using a port type determined by the spanning tree.

71.   (Withdrawn - Previously Presented) The network system as set forth in claim 70, wherein the port type determined by said spanning tree comprises one of a Root Port and a Designated Port.

72.   (Currently Amended) A spanning tree configuration method in a network to which a plurality of nodes are connected, comprising:

generating a new spanning tree after a network configuration change while continuing

to operate only ~~the~~a spanning tree that existed before the network configuration change, and

switching ~~the~~a spanning tree to be used for forwarding to said new spanning tree only after

said new spanning tree has ~~been stable.~~ not varied for a predetermined time.

said switching comprising each node of said plurality of nodes using at any time, as

said spanning tree to be used for forwarding, at most one of said new spanning tree and said

spanning tree that existed before the network configuration change.

73.   (Currently Amended) A spanning tree configuration method in a network to which a

plurality of nodes are connected, comprising:

generating, at a time of a link cost change of the network, a new spanning tree after

the link cost change while continuing to operate only an existing spanning tree, and switching

~~the~~a spanning tree to be used for forwarding to said new spanning tree only after said new

spanning tree has ~~been stable.~~ not varied for a predetermined time,

said switching comprising each of said nodes using at any time, as said spanning tree

to be used for forwarding, at most one of said new spanning tree and said existing spanning

tree.

74.   (Previously Presented) A spanning tree configuration method in a network to which a

plurality of nodes are connected, comprising:

making a new node participate in an auxiliary spanning tree only, not in an existing

spanning tree, while adding the new node.

75.   (Previously Presented) A spanning tree configuration method in a network to which a

plurality of nodes are connected, comprising:

making a connected node to be removed participate in an existing spanning tree only, not in an auxiliary spanning tree, while removing the node.

76.   (Currently Amended) A spanning tree configuration method in a network to which a plurality of nodes are connected, comprising:

creating a new tree after a change using an auxiliary system, wherein the network continues to use only an existing spanning tree while said new spanning tree is being created, when a network configuration has changed.

77.   (Previously Presented) A spanning tree configuration method in a network to which a plurality of nodes are connected, comprising:

using a link free bandwidth to calculate a cost of a spanning tree; and

selecting a spanning tree based on said cost.

78.   (Currently Amended) A spanning tree configuration method in a network to which a plurality of nodes are connected, comprising:

creating a plurality of spanning trees so that all the nodes in the network serve continually as a root node of any oneeach spanning tree among such of the plurality of spanning trees that have all the nodes as members.

79.   (Withdrawn - Previously Presented) A spanning tree configuration method in a network to which a plurality of nodes are connected, comprising:

creating spanning trees that have all the nodes that exist in the network as members,

and, among them, creating a plurality of spanning trees for each link that uses a protocol

whose failure recovery is slow.

80.　　(Currently Amended)　A method of forming a logical topology that is used for signal

transmission in a network to which a plurality of nodes are connected, comprising:

generating a logical topology after a network configuration change with a signal

transmission being performed using only ~~the~~a logical topology that existed before the

network configuration ~~change,~~change; and

only after the logical topology generated after said configuration change has ~~been~~

~~stable,~~not varied for a predetermined time, switching ~~the~~a logical topology to be used for

signal transmission to the logical topology generated after said network configuration

~~change.~~change,

said switching comprising each of said nodes using at any time, as said logical

topology used for signal transmission, at most one of said logical topology generated after

said network configuration change and said logical topology that existed before the network

configuration change.

81.　　(Currently Amended)　A node comprising:

an element which generates a logical topology after a network configuration change,

when changing a configuration of said network to which said element belongs itself, with

~~the~~a signal transmission being performed using the logical topology in said ~~network.~~network;

and

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an element which switches, only after the logical topology after said configuration

change has ~~been stable,~~not varied for a predetermined time, ~~the~~a logical topology to be used

for signal transmission to the logical topology generated after said configuration

~~change.~~change.

said switching comprising said node using at any time, as said logical topology used

for signal transmission, at most one of said logical topology generated after said network

configuration change and a logical topology that existed before the network configuration

change.

82.   (Currently Amended) A computer-readable storage medium on which is encoded a

program comprising:

a function of generating a logical topology after a network configuration change,

when changing the configuration of said network to which said computer-readable storage

medium belongs itself, with a signal transmission being performed using ~~the~~a logical

topology in said ~~network,~~network; and

a function of switching, only after the logical topology after said network

configuration change has ~~been stable,~~not varied for a predetermined time, ~~the~~a logical

topology to be used for signal transmission to the logical topology generated after said

configuration ~~change.~~change,

said switching comprising nodes in said network using at any time, as said logical

topology used for signal transmission, at most one of said logical topology generated after

said network configuration change and a logical topology that existed before the network

configuration change.

83.   (Currently Amended) A network system to which a plurality of nodes are connected,

comprising:

a tree manager generating a logical topology after a network configuration change

with ~~the~~a signal transmission being performed using ~~the~~a logical topology that existed before

the network configuration change, and only after the logical topology generated after said

configuration change has ~~been stable,~~not varied for a predetermined time, switching ~~the~~a

logical topology to be used for signal transmission to the logical topology generated after said

network configuration ~~change.~~change,

said switching comprising said nodes using, as said logical topology used for signal

transmission, at most one of said logical topology generated after said network configuration

change and said logical topology that existed before the network configuration change at any

time.

84.   (Withdrawn - Currently Amended) A node ~~comprising~~comprising:

an element which generates a correspondence between the information on a

destination, which a frame to be entered retains, and a forwarding destination of said frame

using a spanning tree ~~protocol,~~protocol; and

an element which refers to said correspondence to determine the forwarding

destination of the frame that has been entered.